

Pest Update (June 13, 2012)

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Note: samples containing living tissue may only be accepted from South Dakota. Please do not send samples of dying plants or insects from other states. If you live outside of South Dakota and have a question, instead please send a digital picture of the pest or problem. **Walnut samples may not be sent in from any location – please provide a picture!**

Available on the net at:

<http://sdda.sd.gov/Forestry/Educational-Information/PestAlert-Archives.aspx>

Any treatment recommendations, including those identifying specific pesticides, are for the convenience of the reader. Pesticides mentioned in this publication are generally those that are most commonly available to the public in South Dakota and the inclusion of a product shall not be taken as an endorsement or the exclusion a criticism regarding effectiveness. Please read and follow all label instructions and the label is the final authority for a product's use on a particular pest or plant. Products requiring a commercial pesticide license are occasionally mentioned if there are limited options available. These products will be identified as such but it is the reader's responsibility to determine if they can legally apply any product identified in this publication.

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Plant development



We are still ahead of plant development this year due to the mild winter and early spring but only a little ahead now. The catalpas are in bloom in Brookings, only about a week or so ahead of our average flowering time for this tree. We are also seeing the Ural falsespireas beginning to bloom and these normally start flowering at the end of June.

Current concerns



Dutch elm disease is beginning to showing up across the state. The symptoms of Dutch elm disease are wilting and browning leaves, often throughout the canopy but sometimes restricted to an individual branch or limb. They trees expressing symptoms now were probably infected last year or even several years ago, sometimes by root grafts with near-by DED-infested trees that were not promptly removed. These early expression of symptoms are not usually due to new infections carried in by beetles. The symptoms of new infections started by beetle-carried spores generally occurs beginning in July and are often limited, at least initially to the leaves at the

tips of branches turning yellow and wilting. Bark beetles and root grafts are the primary means by which the fungus spreads from host to host. The most effective community-wide effort is to quickly identify and remove DED-infested trees. The sooner infested trees are removed, the less likely the surrounding healthy elms will become infected. Individual, healthy trees can be protected from the disease by root-flare injections of either Arbortect or Alamo though these must be repeated every two to three years.

Mountain pine beetle development

The mountain pine beetle is now either a pupa, callow adult or an adult beneath the bark of the tree. This is the normal stage of development for the middle of June. Since the beetles remain as adults beneath the bark for a few week,

emergence is expected to begin in early to mid-July with the peak around the first week of August.

Are coffeetrees poisonous to livestock?



This question came up last week. Coffeetree (*Gymnocladus dioica*) is beginning to gain favor as a shelterbelt species and with that comes the question if it harm livestock. Coffeetree foliage, pods and sprouts (the tree frequently sends out root suckers) are thought to be poisonous to livestock and people. While poisonings are rare, the plant contains several alkaloids that if ingested can result in gastrointestinal irritation and narcotic-like symptoms to the nervous system. . The reason I say rare is with the exception of one dog poisoning that was mentioned several years ago, the other reports often date back many years ago. For example, the case of a women who was poisoned from also eating the pulp (she confused the tree with honeylocust and the pulp of this plant is edible) frequently shows up in the literature but the original report is in a 1911 book *Manual of Poisonous Plants* which I have a copy. This is a single report by the author hearing from someone else writing that the woman eat the pulp and became ill. There are some cases from Kentucky involving livestock but the actual events are unclear. Generally the tree is listed as potentially poisonous and it is probably best not to plant when horses and cattle can reach them.

Other trees associated with poisoning of livestock include:

Acer (red maple) – foliage

Aesculus (buckeye and horsechestnut) – foliage and seeds

Juglans (Walnut and butternut) – wood shavings used as bedding

Prunus (cherries) – foliage

Quercus (oaks) – acorns and foliage

Robinia (Black locust) – bark, foliage and seeds

Taxus (Yew) – foliage, shoots and seeds

Tasks to complete this week or next



Spruce bud scale crawlers are hatching. The scale resembles a small round, reddish bud and they can be found on near the tips of the branches where the side branches attach to the shoot. They, and their mobile young called crawlers, suck the sap from the shoots resulting in dieback and decline of the lower branches. Since these are soft scales they produce honeydew that results in a black, sooty appearance to the needles and twigs. The scales have one generation per year and the crawlers' hatch

about the time littleleaf lindens are in bloom – meaning now. The time to control them is during the crawler stage. The best treatments are insecticides containing acephate or carbaryl as the active ingredient and applied on the foliage and shoots near the tips. Products containing imidacloprid can be effective as a soil drench but need to be applied in the fall for control the following year.



We are also coming up to the time to treat for spruce needleminer.

The needleminer (*Endothenia albolineana*) gets its name from it's the fact that the young larvae are so tiny they can live inside the needle, mining it as they feed. They eventually outgrow their home and then create a nest of webbed, detached needles to live in. The larvae usually feed on the lower, exterior needles, almost stripping the tips of needles but they can

also be found in the interior of the tree and even the tops of young trees. The adults are small moths that will begin flying soon and depositing eggs on the needles. Control is now generally acephate though carbaryl, is very effective. The trees should be treated in the next week as the adults begin to take flight.

E-samples



Blister beetles are beginning to appear. I have received numerous calls in the last week regarding these slow-moving beetles that are defoliating peashrubs and honeylocusts. The insect is the ashgray blister beetle (*Epicauta fabricii*) and it is commonly found at this time of year feeding on peashrubs, honeylocust, and other legumes (though it will feed on a number of other plants including pines). The adults are slow moving but persistent in their feeding and can strip a tree in a couple of days. The adults feed

for much of the summer and then lay eggs in the soil. The larvae feed on grasshopper eggs so they are considered a beneficial insect – it's the adults that are a problem.

The name blister beetle comes from the poisonous substance, cantharidin, which the beetles excrete when disturbed. The substance can cause severe skin inflammation and blister, even crushing one on your arm or neck can cause the skin to breakout similar to what occurs with poison ivy exposure. Ingesting one can lead to more problems – increased heart rate, sweating and diarrhea. You probably would never eat one – they are slow moving enough that you could pick them out of the potato salad at a picnic – but another favorite food of the beetle is alfalfa and if they remain in the cured hay and are ingested by horse the results can be deadly. **Each ashgray blister beetle adult can contain about 1.00 mg**

of cantharidin and ingesting about 200 to 500 beetles can kill a horse. The substance causes the heart muscle tissue to be destroyed and the horse can die within three days of feeding on the beetles. Several horses were killed a few years ago down near Sioux Falls. Ingesting the insect can also poison cattle and sheep.



I received a call from Rick, one of the foresters with the South Dakota Department of Agriculture, as well as a few other foresters of the eggs masses appearing on cottony maple scale. The cottony maple scale, which despite the name will infest hackberries, lindens and elms as well as maple, is highly visible now with its enormous number of eggs. The eggs hatch about now – when littleleaf linden is in bloom

– and the crawlers migrate to the leaves to feed eventually settling on the branches and twigs. The cottony maple scale is a soft scale, meaning it produces honeydew, a sticky substance that rains down from the tree and creates a tacky surface on everything below. The scale can be controlled now with insecticidal soap, one application now and repeated 10 days later.



I received a great picture of maple bladder gal. These are becoming very noticeable on silver maples at this time. The galls, formed by the maple bladder gall mite, turn color throughout the season – green, red, yellow and finally black. While they are unsightly, they do not harm the tree. No control is needed as even if every leaf is covered there is little harm to the tree's health. This is an appearance problem only.



There are more than just tent caterpillars defoliating plum trees. Last week I had a landowner contact me with a question about an insect spinning webs on their plum tree. The insect is the plum web-spinning sawfly (*Neurotoma inconspicua*) also known as the plum webworm. The larvae spin webs at the tips of branches and feed on the leaves. The webs are sometimes mistaken for those made by the tent caterpillars but the insects

are quite different with the sawfly having 9 pairs of legs and two points on the end of the abdomen. This insect can defoliate the trees by midsummer.



injury to the elms but the sticky honeydew that drips down from the tree is sometimes annoying to people.

I also received a picture of the woolly elm aphid, one of many insects that seem to be increasing in numbers at this time of year. This is an interesting insect as it alternates between two hosts, elm and serviceberry (*Amelanchier* spp). The insect forms this cotton-like masses on elm leaves, as well as honeydew, but feeds on the roots of the serviceberry, an interesting change of hosts and parts! The insect usually does little



I have received a number pictures and questions regarding willow scab (*Venturia saliciperda*). This is a very common foliage disease that appears in late summer on willow trees across the state. The disease is closely related to apple and pear scab and the typical symptoms are discolored and falling leaves as well as tip dieback. This disease has similar symptoms to black canker (*Glomerella miyabeana*), a willow twig

disease that can also cause the leaves to wilt and the shoot tips to die back. The two diseases are difficult to separate but the willow scab infected leaves will usually have “tufts” of spores on the underside of the leaf, generally along the mid-vein. These two diseases are often found in association with one another and when they occur together the disease is just simply called willow blight.

Samples received

Brookings County FL1200024-27

What is wrong with these trees?

This was a package of samples. The willow samples had willow scab, a problem that is discussed under e-samples. The maple had maple bladder gall mite and this common pest is also discussed under e-samples. The chokecherry fruit is infected with plum pockets. This is a disease that is more common on plums than chokecherries but I have seen it on cherries from time to time. This can be confused with a midge that attacks chokecherry fruit; they both hollow out the fruit, so proper identification of the problem is always important. The disease plum pockets is not easy to treat and I would not advise trying – the odds of any control are very low. Finally the ash leaves were infected with ash rust, another disease discussed in several earlier Updates this year.

Brown County

lilac leave to shrivel?

What is causing this Japanese tree

Most likely this is the bacterial blight disease (*Pseudomonas syringae*). We see it on tree lilac just about every year. The disease starts with leaves that shrivel or pucker and then it can progress to blackening leaves and terminals – almost appearing like fireblight. Sometimes entire branches die back. Since the disease is a bacteria rather than a fungus, most fungicides do not work but copper treatments in the spring are sometimes effective.

Clark County FL1200023

What is wrong with this hackberry?

The sample noted that the trees and the garden appear damages so I suspect someone is wondering if this injury is due to herbicide drift. The only sample received was hackberry leaves and they had the common mosaic pattern of yellow and green that is a common symptom for hackberry island chlorosis and is thought to be due to a virus. There is no control for this disease nor does it appear to harm the tree other than discoloring the foliage.

Davison County FL1200022

The foliage on these spruce are discoloring and appears to be dying. What might be the problem?

Rarely do Colorado (blue) spruce have only one problem, usually there are several that can be found and it is hard to assign weights as to which are most responsible for the decline. The most serious problems with spruce are site related and this species does not perform well on poorly drained soils or excessively droughty soils. The only problems seen on the sample submitted were spruce needleminer and spruce bud scale. The needleminer is the insect responsible for detaching the needles and bundling them together. This is a common pest in eastern South Dakota and I have seen heavily infested trees that have every tip bare from feeding by this insect. Spruce needleminer should be emerging soon and controls are identified in this *Update*. The other problem found on the sample was the spruce bud scale but not in high enough populations to warrant control. While the needleminer is a problem that needs to be treated I suspect there are more serious soils or site related problems with these young trees.

Sully County

What is causing the leaves on this American elm to become blacken and sticky?

This is the woolly elm aphid. This insect creates cottony masses on twigs and leaves and the honeydew excreted by the insects causes the leaves to become sticky. This honeydew is often colonized by sooty mold so the tissue also becomes blackened. The best control is a soil drench of imidacloprid, such as Bayer Advanced Tree and Shrub Insect Control, applied in October. This will control the insect the following summer.

Tripp County
maple leaves?

What are these bumps on these

The bumps are the result of mite activity, the maple bladder gall mite, and the cluster of galls turn from green to red to black as the season progresses. There is little that can be done to control this mite nor is there a need since they merely make the leaves look ugly but do not reduce the leaf's functions